



Air Quality Permitting Statement of Basis

May 24, 2006

**Permit to Construct
No. P-060404**

**The Amalgamated Sugar Company LLC
Mini-Cassia Facility
Paul, Idaho**

Facility ID No. 067-00001

Prepared by:

Almer Casile, Permit Writer 
AIR QUALITY DIVISION

FINAL

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Acronyms, Units, and Chemical Nomenclature

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
campaign year	the period starting with the first day of new beet crop processing and ending the day before the start of the next year's beet crop processing
CO	carbon monoxide
cwt	hundred weight (1 cwt = 100 lb)
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAPs	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
MACT	Maximum Available Control Technology
NESHAP	Nation Emission Standards for Hazardous Air Pollutants
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
PM₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
SIC	Standard Industrial Classification
SO₂	sulfur dioxide
TASCO	The Amalgamated Sugar Company LLC
T/yr	tons per any consecutive 12-month period
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho for issuing permits to construct (PTC).

2. FACILITY DESCRIPTION

This facility is a sugar beet processing plant in which sugar beets are processed into refined sugar.

3. FACILITY / AREA CLASSIFICATION

This facility is classified as a major facility for both Tier I operating permit and the PSD permitting programs because it emits or has the potential to emit SO₂, NO_x, CO, PM₁₀, and PM at major source levels. The AIRS classification is "A" for all the above pollutants and "B" for VOCs and HAPs. (As part of TASCOS's Tier I permit renewal, TASCOS provided documentation demonstrating that the facility is a minor source for HAPs.) The SIC code defining the facility is 2063.

This facility is located within AQCR 63 and UTM zone 12. The facility is located in Minidoka County, which is designated as an attainment or unclassifiable area for all criteria air pollutants.

The AIRS information provided in the Appendix A defines the classification for each regulated air pollutant. This required information is entered into the EPA AIRS database.

4. APPLICATION SCOPE

This permitting action is a permit modification. Specifically, the Amalgamated Sugar Company LLC (TASCOS) requested that 2,966,000 tons per campaign year beet throughput limit established by the previous PTC be replaced by a 3,200,000 beet throughput limit.

4.1 Application Chronology

February 9, 2006	DEQ receives application.
March 6, 2006	DEQ determines application complete.
March 31, 2006	DEQ provides draft permit to facility and its Twin Falls Regional Office for review

5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this PTC.

5.1 Equipment Listing

The proposed increase in the beet slicing rate does not involve a change in equipment.

5.2 Emissions Inventory

The pollutants of concern are acetaldehyde, formaldehyde, PM₁₀, SO₂, and VOCs. A summary of emissions associated with the proposed annual increase in beet slicing throughput is given below in Table 1. A detailed emissions inventory has been included in Appendix B.

Table 5.1 EMISSIONS INVENTORY

Source Description	PM ₁₀	SO ₂	VOC	Acetaldehyde	Formaldehyde
	T/yr	T/yr	T/yr	T/yr	T/yr
Main Mill			3.6		
Carbonation Tanks				2.86E-01	2.60E-03
Evaporator Vent				2.89E-03	5.30E-05
Process Slaker	0.06				
Sulfur Stoves		0.7			

5.3 Modeling

Acetaldehyde and formaldehyde emissions exceed the EL for each pollutant given in IDAPA 58.01.01.586. Therefore, modeling for compliance with the AACC for each pollutant was required. The results of the modeling analysis demonstrate to DEQ's satisfaction that the proposed project will not cause or contribute to a violation of any ambient air quality standard.

Table 5.2 MODELING RESULT SUMMARY

Pollutant	Averaging Period	Ambient Concentration (µg/m ³)	AACC (µg/m ³)	Exceeds AACC (Y or N)
Acetaldehyde	Annual	1.49E-02	4.5E-01	N
Formaldehyde	Annual	1.4E-04	7.7E-02	N

5.4 Regulatory Review

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC.

IDAPA 58.01.01.201 Permit to Construct Required

The facility's proposed project does not meet the permit to construct exemption criteria contained in Sections 220 through 223 of the Rules. Therefore, a PTC is required.

IDAPA 58.01.01.203 Permit Requirements for New and Modified Stationary Sources

The applicant has shown to the satisfaction of DEQ that the facility will comply with all applicable emissions standards, ambient air quality standards, and toxic increments.

IDAPA 58.01.01.210 Demonstration of Preconstruction Compliance with Toxic Standards

The applicant has demonstrated preconstruction compliance for all TAPs identified in the permit application.

IDAPA 58.01.01.224 Permit to Construct Application Fee

The applicant satisfied the PTC application fee requirement by submitting a fee of \$1,000.00 at the time the application was submitted on February 9, 2006.

IDAPA 58.01.01.225..... Permit to Construct Processing Fee

The total emissions from the proposed change are between 1 and 10 T/yr; therefore, the associated processing fee is \$2,500.00. No permit to construct can be issued without first paying the required processing fee.

6. PERMIT CONDITIONS

This section lists only those permit conditions that have changed or have been deleted as a result of this permit modification. All other permit conditions remain unchanged. Permit conditions related to the modified permit are identified as Modified Permit Conditions. Permit conditions related to the existing permit are identified as Existing Permit Conditions.

Existing Permit Condition 2.3 limits beet slice throughput to 2,966,000 tons per campaign year.

Modified Permit Condition 2.3 limits beet slice throughput to 3,200,000 tons per campaign year.

7. FEES

TASCO paid the required PTC application fee of \$1,000.00 on February 9, 2006, and the processing fee of \$2,500.00 on April 11, 2006.

8. PERMIT REVIEW

8.1 Regional Review of Draft Permit

A draft copy of the permit was provided to the Twin Falls Regional Office on March 22, 2006.

8.2 Public Comment

In accordance with IDAPA 58.01.01.209, an opportunity for public comment is being held from March 13, 2006, through April 14, 2006.

9. RECOMMENDATION

Based on the review of the application materials, and all applicable state and federal regulations, staff recommends that DEQ issue draft PTC No. P-060404 to the Amalgamated Sugar Company LLC. At this time, no public comment period has been requested in accordance with IDAPA 58.01.01.209.

ABC/bf Permit No. P-060404

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Appendix A

AIRS Information

P-050421

Facility Name: The Amalgamated Sugar Co. LLC
Facility Location: MiniCassia Facility
AIRS Number: 067-00001

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO ₂	A	A					A	
NO _x	A	A					A	
CO	A	A					A	
PM ₁₀	A	A					A	
PT (Particulate)	A	A						
VOC	B	B					B	
THAP (Total HAPs)							B	
			APPLICABLE SUBPART					
			Db					

^a Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

^b AIRS/AFS Classification Codes:

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, or each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).

Appendix B

Emissions Inventory

P-050421

**Main Mill, Process Slaker & Sulfur Stoves
Net Annual Emissions Increases
Increased Annual Beet Slice to 3,200,000 tons/y
Mini Cassia Facility**

234000 = slice increase from 2,966,000 to 3,200,000 tons per year (tons/y)

Process Slaker

0.021 = tons CaO per ton beet slice from supplemental lime (tons/tons)
4914 = tons additional lime per year thru process slaker (tons/year)
0.03 = lbs PM per ton CaO (lbs/ton)
0.07 = tons PM per year net increase from process slaker (tons/year)
0.024 = lbs PM10 per ton CaO (lbs/ton) - Nov. 2000 Stack Test
0.06 = tons PM10 per year net increase from process slaker (tons/year)

Sulfur Stove

0.13 = lbs sulfur per ton beet slice (lbs/tons)
15.2 = tons additional sulfur per year thru sulfur stoves (tons/year)
0.006 = lbs SO₂ per ton beets (lbs/ton) - 1992 Stack Test
0.7 = tons SO₂ per year net increase from sulfur stoves (tons/year)

Main Mill

0.031 = lbs VOC's per ton beets (lbs/ton) - Engineering estimates
3.6 = tons VOC's per year net increase from main mill (tons/year)

Main Mill Vents
Net Annual Emissions Increases
Increased Annual Beet Slice to 3,200,000 tons/y
Mini Cassia Facility

Source	Acetaldehyde	Formaldehyde
Emission Factor ¹ (lbs/tons beets)	2.47E-03	2.27E-05
Annual Beet Slice Increase (10 ⁶ ton/yr)	0.234	0.234
Annual Emissions Increase (tons/y)	2.89E-01	2.66E-03
Annualized Emissions Increase (lbs/h)		
-Total	6.60E-02	6.06E-04
-1st Carb Tank Vent	2.57E-02	2.79E-04
-2nd Carb Tank Vent	3.96E-02	3.15E-04
-Evaporator Vent	6.60E-04	1.21E-05

¹ Engineering estimates and stack testing data.